

## **THE NEW MAIN SCIENTIFIC CONTRIBUTION OF THE THESIS**

Name of thesis: “ *Investigating the relationship between cardiac manifestations and the treatment targets from ESC-EASD guidelines for type 2 diabetic patients with hypertension.*”

Speciality: **Endocrinology**

Code: **62 72 01 45**

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*\* The significance of science and practical subjects*

### **1. Applying the ESC-EASD guidelines for type 2 diabetic patients with hypertension.**

On type 2 hypertension diabetic patients without ischemic heart disease, the first time application from ESC - EASD recommendation (coordination between Cardiology and Diabetes) about state the control measures for reaching targets treatment were 33.6% glycemia, 40.5% blood pressure, 20.7% LDL.C concentration and significantly low percentage of 28.4% physical activity.

### **3. Limiting the use of the ESC-EASD guidelines for type 2 diabetic patients with hypertension.**

Recently, the cardiovascular risk factors have been classified into nontraditional risk factors for cardiovascular diseases in diabetes which were discovered by the research such as: 24.1% Hs-CRP  $\geq 3$  mg/dl, 44% UACR  $\geq 3$  mg/mmol, 26.7% eGFR  $< 60$  ml/min/1.73 m<sup>2</sup>, 76.7% IMTc  $\geq 0.9$  mm and 47.4% plaques. In addition, the proportion of type 2 diabetic patients with hypertension had abnormal echocardiography (morphology, diastolic function, Tei index) and abnormal NT-proBNP concentration which were high percentage of 85.3%. The study results told that the criterion of ESC-EASD guidelines for hypertension type 2 diabetes has not been enough, so need to add more nontraditional cardiovascular risk factors .

### **2. Assessment the short-term treatment**

Although one year was not the ideal time to evaluate , the fact research gave the anthropometric indices (reduction of 0.58 kg/m<sup>2</sup> BMI , waist circumference by 1.13 cm), HDL.C ( increase of 0.12 mmol/L and 29.8% achieve the goals of HDL.C) significant

improvements ( $p < 0,05$ ). However, the glycemic index were same in the two assessments which showed that the glycemic control in type2 diabetes mellitus is always the most difficult task in many domestic and foreign researches.

The progression of subclinical target organ damages tended to increase 45% abnormal morphology and structure of the heart muscle in which had 17 % new regional wall motion abnormalities, 28.2% microalbuminurea, 0.35 mm IMTc in the left , 0.34 mm in the right and 17% carotid plaques. Those results has proved that the target organ damages in diabetic patients with hypertension have been one of the issues which should be paid attention to find in the present and in the future time.

**4. The role of some biomarkers in predicting ischemic heart disease of hypertensive diabetic patients:** The study showed that the cutoff point of HbA1C in predicting the ischemic heart disease of hypertension type 2 diabetes was suggested 8.8% (AUC = 0.79, 95% CI: 0,62- 0.96];  $p < 0.01$ ) with a sensitivity 75%, specificity: 71.8% and NT-proBNP cut threshold of ischemic heart disease of hypertension type 2 diabetes was 136,1 pg/ml (AUC = 0.73, 95% CI: 0.56-0.90];  $p < 0.05$ ) with 75% sensitivity, specificity 64.1%.